INSTRUCTIONS TO STATE AND LOCAL AGENCIES FOR UPDATING THE COUNTY-LEVEL DATABASE FROM EPA'S NATIONAL MOBILE INVENTORY MODEL

TECHNICAL MEMORANDUM

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I. INTRODUCTION

The U.S. Environmental Protection Agency (EPA)'s Office of Transportation and Air Quality (OTAQ) has developed a model known as the National Mobile Inventory Model (NMIM). The purpose of this model is to develop national onroad and nonroad emission inventories. NMIM includes a county-level database, the NMIM County Database or NCD, with parameters specific to each county. The data in this county-level database are used to develop MOBILE6.2 and NONROAD model input files within NMIM. NMIM then runs these models and calculates criteria pollutant and hazardous air pollutant (HAP) emission inventories based on data in the county-level database. The NMIM county-level database for 2011 has been populated with EPA's current default 2011 data. EPA is now asking the state and local (S/L) agencies to review and update this database so that future NMIM emission inventories for the nonroad sector will more closely replicate the inventories developed by the states. **EPA is only asking for S/L agency review of the data in the NCD that affects the nonroad emission calculations**. EPA will be calculating the 2011 NEI using the Motor Vehicle Emission Simulator (MOVES) model which uses a different database than the NCD. Thus, although the NMIM NCD includes onroad data, the onroad data should be ignored by S/L agencies in their review of the NCD. Go to the 2011 NEI webpage (http://www.epa.gov/ttn/chief/net/2011inventory.html) for instructions on submitting onroad inputs.

EPA strongly encourages agencies to submit NMIM NCDs instead of emissions as they allow for more in-depth analysis and consistent, integrated emissions in the NEI. If you do not submit nonroad input data, EPA will generate emission estimates using national defaults. Agencies may accept EPA defaults in lieu of submittals by sending a "support request" to Emission Inventory System (EIS) that states this.

The purpose of this memo is to explain to state and local agencies what data are contained in the NMIM county-level database that EPA is asking them to review and update as needed. The NMIM county-level database has been converted to Comma Separated Value (CSV) tables for easier review and updates. These files can be found in the EIS Gateway (https://eis.epa.gov/eis-system-web/welcome.html).

Data in the NCD are stored in two ways: either as entries in database tables (referred to as tables) or as external text files (referred to as files). The names of external files are referenced in database tables. States may add or change database entries or external files. If an external file is added or its name is changed, states must also add or change the name in the database table that references it. Agencies making any updates are required to send the complete set of NCD tables back to EPA even if changes were not made to every table.

All external text files submitted by each state or local agency must conform to the specified NMIM file format. States need submit only new or updated external files. All external input files shall be submitted in NMIM file format and shall contain comments such as year, source of information, etc. Note that all the external files that reference onroad inputs have been removed to save space and simplify.

States must provide documentation for changes. Such documentation should describe what was changed and why it was changed. If the change involves new data, the documentation should describe how the data were collected, quality assured, and analyzed. A listing of the tables with changes and the number of rows per table that have been added or updated would be extremely helpful for EPA's review. States are required to include a text file with this information.

II. DATA FOR REVIEW/SUBMITTAL

Each of the NMIM tables that provide information that can be updated by states is described below. The level of detail and the parameters contained in each table are listed. This is followed by a comment section indicating the updates that EPA hopes to obtain for each table. It is not expected that states will have updates to all of the files and table fields listed below

It is important to note that the most specific level of geographic allocation within NMIM is the county. As a result, NMIM cannot weight together results from different NONROAD runs within a county. EPA does not claim that NMIM will reproduce the inventories produced by the states, but does hope to come closer to representing the state inventories than would be done using NONROAD default information.

A. COUNTY

This is a county-level table. It contains:

- The altitude (high or low) and average barometric pressure of each county;
- The starting month and day of the ozone season and the ending month and day of the ozone season (this information is not currently used);
- Onroad Stage 2 control program information;
- Natural gas vehicle fractions; and
- Data source codes for VMT allocation fractions and temperature/relative humidity data.

Comments

This table should be reviewed, and updated as necessary, but in almost all cases, no changes should be needed to this table.

Note that for Alaska, the following county Federal Information Processing Standard (FIPS) codes should be included in this table: 201, 232, and 280. This also applies to all other tables that include the county FIPS codes. While these codes are no longer valid for the NEI and have been replaced by county FIPS codes 105, 195, 198, 230, and 275, the NONROAD model has not been updated to include the newer set of county codes and thus, NMIM produces errors when the new county codes are used. Instead, EPA will run NMIM with the old set of counties and then allocate emissions from the three invalid county codes to the five new county codes. Table 1 shows the relationship between the older invalid county FIPS codes and the new county FIPS codes to be used in the 2011 NEI. The EPA default NCD contains the three invalid county FIPS.

Alaska will not be able to pass EIS QA with a submittal containing the old county FIPS. Should Alaska wish to submit NCD files, please contact EPA staff for assistance.

Table 1. Relationship between Valid and Invalid County FIPS Codes in Alaska

New State/ County FIPS Code	New County Name	Fraction of Invalid County Emissions (based on 2010 population)	Invalid State/ County FIPS Code	Old County Name
02198	Prince of Wales-Hyder Census Area	1.000	02201	Prince of Wales-Outer Ketchikan Census Area
02105	Hoonah-Angoon Census Area	0.690	02232	Skagway-Hoonah-Angoon Census Area
02230	Skagway Municipality	0.310		
02195	Petersburg Census Area	0.617	02280	Wrangell-Petersburg Census Area
02275	Wrangell City and Borough	0.383		

B. COUNTYYEARMONTHHOUR

This table contains the average hourly temperatures and relative humidity for each month by county. The hour ID codes used in this table are defined in Table A-1.

Comments

NMIM requires that each county have both hourly average temperatures and hourly relative humidity values for each month of the year. Default values, based on National Climatic Data Center (NCDC) data and calculations described below, are provided in the NMIM County Database (NCD). The default values included in this table represent 2009 data calculated by EPA. Prior to running NMIM, EPA will update these default data with 2011 data.

EPA is confident that in most cases the default 2011 temperature and humidity values to be developed for the NCD will be the best values to use in the inventory calculations for each county. However, EPA recognizes that there are circumstances under which state, local and tribal agencies may have better temperature and humidity information. These circumstances include:

- The use of local temperature and humidity measurements that are not provided to the National Climatic Data Center (NCDC).

- Physical characteristics of the county (such as sea shores, valleys and sudden changes in altitude) which make the centroid interpolation methodology used by EPA inappropriate.

In these cases, EPA would be happy to incorporate temperature and humidity values submitted by a state, local or tribal agency if it meets the following criteria:

- Monthly average temperature and relative humidity values are submitted for each hour of the day for each month of the year for each county. Any change in temperature values will require a corresponding change in relative humidity.

- Dew point values have been obtained from the same data sources as the temperature data submitted.

- Monthly average hourly temperatures and relative humidity values have been calculated using the averaging methods described below.

- Documentation of the data sources and methods used to calculate the average temperatures and relative humidity values is provided.

New or updated monthly average hourly temperatures and relative humidity submitted by states must be in accordance with the NMIM CountyYearMonthHour database formatting.

The procedure below briefly describes how EPA derived the default temperature and relative humidity values for NMIM. A similar approach could be used by state or local agencies for deriving average hourly temperature and humidity data values for each month from a different data set.

The NMIM default temperature and humidity values were derived from raw measurement data obtained from the National Climatic Data Center (NCDC). The NCDC data was obtained from stations of all classifications, including First-Order (National Weather Service), Second-Order (both Automated Surface Observing System (ASOS) and Automated Weather Observing System (AWOS)), and cooperative (local).

Population centroids (latitude and longitude) for each county were obtained from the 2000 United States Census. Population, rather than geographic, centroids were used to provide a reasonable estimate of where the county's vehicle miles traveled and nonroad activity would be concentrated. From each county's centroid, we calculated the distance and direction to each weather station. The distance was computed using the standard great circle navigation method and the constant course direction was computed using the standard rhumb line method. A rhumb line is a line on a sphere that cuts all meridians at the same angle; for example, the path taken by a ship or plane that maintains a constant compass direction. For each of the eight compass directions (octant), the stations were sorted by distance. The station closest to the centroid for each octant was chosen for further processing. If the closest station was more than 200 miles away, that octant was ignored. (Such situations occurred near the oceans and the along the Canadian and Mexican borders.) The temperatures from these eight (or fewer) stations were then averaged together using inverse-distance weighting to produce an average county temperature for each hour of the day.

Relative humidity is a calculated value that depends on both temperature and dew point. Average hourly dew points were computed employing the same octal search, inverse-distance

weighting scheme as used for temperature. The relative humidity was then computed from the resulting hourly temperature and dew point pairs.

The daily temperature and dew point averages for each hour were then used to calculate adjusted monthly average for each hour. Because minimum and maximum temperatures occur at different hours each day, the minimum of the hourly averages will be higher than the average of the daily minima, and the daily maximum of the hourly averages will be lower than the average of the daily maxima.

To avoid this narrowing of the daily temperature range, the monthly average of hourly temperatures was assumed to capture the daily temporal pattern and was mathematically stretched so that the low temperature equaled the monthly average of the daily minima and the high temperature equaled the monthly average of the daily maxima, producing a set of monthly average hourly temperatures consistent with the maximum and minimum values. Not all stations record hourly temperature values, so the subset of the stations which do record hourly temperatures was used to determine the initial average temperatures in each hour for each month. The same procedure was applied to the dewpoint values. An adjusted monthly average hourly relative humidity was then calculated from the adjusted monthly average hourly temperatures and dewpoints.

The stretching algorithm used to produce the adjusted hourly temperatures and dewpoints using the maximum, minimum and hourly values is shown here:

$$T = MinT + (t-mint) * [(MaxT-MinT)/(maxt-mint)]$$

$$D = MinD + (d-mind) * [(MaxD-MinD)/(maxd-mind)]$$

Where:

T = The adjusted monthly average temperature for an hour in a month.
t = The average temperature for an hour in the month calculated from the hourly point measurements taken at a fixed time each hour at some stations.
MaxT = The monthly average daily maximum temperature using all daily maximum (peak) temperature reading from all stations.
MinT = The monthly average daily minimum temperature using all daily minimum (peak) temperature reading from all stations.
maxt = The maximum monthly average hourly temperature calculated from the maximum hourly point measurements taken at a fixed time each hour at some stations.
mint = The minimum monthly average hourly temperature calculated from the minimum hourly point measurements taken at a fixed time each hour at some stations.

D = The adjusted monthly average dewpoint for an hour in a month.
d = The average dewpoint for an hour in the month.
MaxD = The monthly average daily maximum dewpoint.

MinD = The monthly average daily minimum dewpoint.
maxd = The maximum monthly average hourly dewpoint.
mind = The minimum monthly average hourly dewpoint.

The determination of the default NMIM temperature and relative humidity values is discussed in more detail in the report, "Derivation of By-Month, By-County, By-Hour Temperature and Relative Humidity with Monthly Data," by Air Improvement Resources, Inc. (December 8, 2004).

C. COUNTYNRFILE

This table contains fields for specifying the file names of external data files containing county-specific nonroad data.

Comments

States may provide data in the appropriate NONROAD external data file format to replace the default NONROAD model data. The NONROAD external data files which state and local agencies may provide are: (1) activity rates; (2) seasonal allocations; (3) source populations; (4) growth indexes; and (5) equipment-specific county allocations. The FileTypeID field in this table should be filled in with one of the FileTypeID codes listed in Table A-2.

External File Naming Convention

There may be many external data files supplied by state and local agencies, which will need to be stored along with the NMIM county-level database with county-specific data for use by NMIM. Since these files will be submitted by different agencies, EPA has developed a file naming convention to prevent two files submitted by different areas from having the same name. The NONROAD model requires file names with only eight characters with a three character file name extension (after the decimal). The file naming convention developed for NMIM is based on the FIPS state and county codes of the data represented in the file. The basic file name convention begins with the two digit FIPS state code followed by the three digit FIPS county code followed in some cases by a nonroad ID code with a three letter code extension to identify the file type. Table A-3 summarizes the NMIM file naming convention for external data files named in the CountyNRFile table.

External data files that apply to the whole state (rather than individual counties) should start with the two digit FIPS state code followed by "000". Only a unique set of external data files is needed. Therefore, for external data files that apply to more than one, but not all, counties in a state, only a single external file should be submitted. In this case, the three digit FIPS county code should be filled in with the FIPS county code of one of the counties that use this data file. However, a record must be added to the CountyNRFile table for EACH county that uses one of these external data files, but the CountyNRFileName field should then be filled in with the same file name for each file that uses a single external data file.

D. COUNTYYEAR

This county-level table contains the names of external data files used by the MOBILE6.2 and NONROAD models. While most of the fields in this table are relevant only to onroad emission calculations, and therefore, do not need to be updated, the following fields are used by the NONROAD model and should be reviewed and updated for the 2011 NEI as needed:

- NONROAD Stage 2 control percentage (Stage2Pct);
- NONROAD activity files (NRACTFileName);
- Identifier for nonroad state inputs (HasNRStateInputs); and
- Average hourly temperatures and relative humidity data sources.

Comments

S/L agencies that are providing NONROAD activity files should input the file name of the corresponding external file, excluding the file extension, in the NRACTFileName field. In addition to populating or updating this table, states also need to provide each of the external data files referenced in the table that has either been modified from the file provided by EPA or is a new file. EPA requires states to submit new or updated files in the appropriate NMIM data format with comments (e.g., source of information and year(s) of applicability), where possible.

Note that the Stage2Pct field refers to the nonroad Stage 2 percentage control efficiency (not onroad Stage 2) and should be populated with values ranging from 0 to 100, where applicable.

External File Naming Convention

As with the CountyNRFile table, this table includes the names of external data files used by the state and local agencies. The file naming conventions for the external data files referenced in the CountyYear table are similar to those used for the CountyNRFile table. Table A-4 in the Appendix contains the extensions and file naming convention for the external NONROAD activity files referenced in the CountyYear table.

The NONROAD model requires file names with only eight characters with a three character file name extension (after the decimal). The file naming convention developed for NMIM is based on the FIPS state and county codes of the data represented in the file. Many files will be valid only for specific calendar years. The file name convention begins with the two digit FIPS state code followed by the three digit FIPS county code followed by a two digit calendar year with a three letter code extension to identify the file. The file names input in the NRACTFileName field of the CountyYear table should NOT include the file extensions.

External data files that apply to the whole state (rather than individual counties) should start with the two digit FIPS state code followed by "000". Only a unique set of external data files is needed. Therefore, for external data files that apply to more than one, but not all, counties in a state, only a single external file should be submitted. In this case, the three digit FIPS county code should be filled in with the FIPS county code of one of the counties that use this data file. However, this external file name must be entered for EACH county that uses this external data

file in the appropriate field of the CountyYear table. Data from a single year may be used for multiple calendar years without submitting separate files for each year. (EPA is only requesting 2011 data at this time.) In these cases the two calendar year digits will contain the letter "Y."

E. COUNTYYEARMONTH

This table maps each county to both onroad and nonroad gasoline, diesel, and natural gas fuel data for each month.

Comments

The default values included in this table and the corresponding fuel properties in the gasoline, diesel, and natural gas tables represent 2009 fuel data, as calculated by EPA. Prior to running NMIM, EPA will update these default data with 2011 data.

NMIM models both criteria pollutants and HAPs simultaneously. Thus, all of the fuel parameters needed for the toxics are also needed to model the criteria pollutants. States should review the information in this file. If the state knows that a group of counties should all receive the same fuel parameters (e.g., if a low RVP program applies to all counties within a nonattainment area) and the NMIM CountyYearMonth table lists different gasoline IDs for these counties, the state should indicate which counties should receive the same fuel parameters, and which gasoline ID should apply to these counties.

There are separate gasoline IDs for onroad (HwyGasolineId) and nonroad (NRGasolineId). Currently, we assume that onroad and nonroad gasoline IDs are identical. Any updates to the gasoline properties should be done by first replacing both the HwyGasolineID and NRGasolineID in the CountyYearMonth table with a new ID not yet used in the Gasoline table. When adding new gasoline IDs, the naming convention is SSNNN, where SS indicates the state number and NNNN is a unique number chosen by the state. Local agencies should coordinate with their state agency to ensure that any county-specific new gasoline IDs are unique.

A new record should then be added to the Gasoline table with this same new gasoline ID and a full set of the fuel parameters. EPA will allow states to make changes to Reid vapor pressure (RVP) and sulfur levels. EPA will be more cautious about accepting fuel parameter changes to the other fuel properties.

Currently, the only property of diesel fuel in the NCD is sulfur content. Sulfur content is specified separately for highway (HwyDieselId), recreational marine equipment (RMDieselId), and other nonroad equipment (NRDieselId). The table has been designed so that the each of these diesel IDs is equal to the integer value of the diesel sulfur content in parts per million (ppm). To change the sulfur value of the diesel fuel, first change the corresponding diesel ID to the integer value of the diesel sulfur content in ppm. Then check the Diesel table to see if this value exists. If not, add a record to the Diesel table with this new value.

Currently, the only property of natural gas in the NCD is sulfur content. Any updates to the natural gas should be done by first replacing NGId in the CountyYearMonth table with a new ID not yet used in the NaturalGas table. A new record should then be added to the NaturalGas table with this same new NGId and the sulfur content in ppm.

F. DIESEL

This table contains the diesel sulfur content for each diesel fuel ID contained in the CountyYearMonth file.

Comments

Most states will not need to update this file. However, state and local agencies with information on the diesel fuel sulfur content of diesel fuel sold in their state that differs from the NMIM defaults should update this table accordingly. How to update this table is described under CountyYearMonth above.

G. GASOLINE

This table provides all of the gasoline fuel properties for each of the gasoline IDs included in the CountyYearMonth file. These are the properties needed for both criteria pollutants and toxics. **If you are also submitting gasoline parameters in MOVES County Database input, you do not need to submit revisions to this table in your NCD.**

Comments

As indicated above in the CountyYearMonth section, the properties of the existing gasoline IDs should not be modified since other states may be using the same gasoline ID. Instead, a new record should be added to the Gasoline table with a new gasoline ID and the appropriate fuel properties. The CountyYearMonth table should also be updated at the same time, updating the gasoline ID for the affected counties. When adding new gasoline IDs to the table, the naming convention is SSNNNN, where SS indicates the state number and NNNN is a unique number chosen by the state. Local agencies should coordinate with their state agency to ensure that any county-specific new gasoline IDs are unique.

Interpolation Instructions

The purpose of this section is to provide S/L agencies with instructions on how to develop a complete set of 12 monthly values for one or more of the following gasoline variables when the agency has less than a full set of monthly values: RVP, Gas Sulfur, Gas Max Sulfur, Aromatic Content, Olefin Content, Benzene Content, E200, E300, ETOH Volume and ETOH Market Share. MTBE, ETBE, and TAME are not included in the interpolation procedure because they are all assumed to be 0. The interpolation procedure requires values for January and July (in cases where a state only has a value for one of these months, it would need to rely on EPA's default value for the other month), and relies on the use of ratios computed from county-month

level RVP values developed by EPA. These ratios are available from the file "InterpolationRatios.csv" Agencies should apply these ratios in the following equation for the gasoline variables for which states have data:

$$Var_{month} = Var_{July} + (Var_{January} - Var_{July}) * Ratio_{RVP}$$

Where:

Var_{Month} represents the variable for a county-month;
$Var_{January}$ is the county's value for the variable in January; and
Var_{July} is the county's value for the variable in July.

The lone exception to use of the above procedure is ETOH Volume. The procedure for ETOH Volume also takes the ETOH Market Share into account–interpolated values for this variable are computed using the following equation:

$$ETOH\ Vol_{Month} = ((ETOH\ Vol_{July} * ETOH\ Mkt\ Share_{July}) + ((ETOH\ Vol_{Jan} * ETOH\ MktShare_{Jan}) – (ETOH\ Vol_{July} * ETOH\ Mkt\ Share_{July})) * Ratio_{RVP}) \div ETOH\ Mkt\ Share_{Month}$$

The above formulas are used to compute values for each of the remaining 10 months.

H. NATURAL GAS

This file contains the natural gas sulfur content for each natural gas ID.

Comments

Most states will not need to update this file. However, state and local agencies with information on the sulfur content of natural gas sold in their state that differs from the NMIM default natural gas sulfur content should update this table accordingly. How to update this table is described under CountyYearMonth above.

I. STATE

This is a state-level file that lists external file names used by MOBILE6.2 for modeling non-default NLEV implementation schedules or non-default Tier 2 exhaust phase-in schedules, evaporative phase-in schedules, and alternative Tier 2 certification standards.

Comments

The only fields in this table relevant to the nonroad sector are the fields listing the state FIPS identifier, state name, and state abbreviation. These fields will not change. Therefore, no updates should be made to this file for the 2011 NEI. However, this table must be present in the submissions to the EIS, so the default table provided by EPA should be included in the submission, with no changes from the state/local agency.

J. BASEYEARVMT

This table contains the 2008 annual VMT data by state, county, vehicle type, and roadway type. The VMT units are millions of miles.

Comments

This table affects only the onroad emission calculations and will not be used in the 2011 NEI. Therefore, state and local agencies should not make any updates to this table for the 2011 NEI. However, this table must be present in the submissions to the EIS, so the default table provided by EPA should be included in the submission, with no changes from the state/local agency.

K. COUNTYVMTMONTHALLOCATION

This table contains monthly VMT allocation fractions by county, vehicle type, and roadway type.

Comments

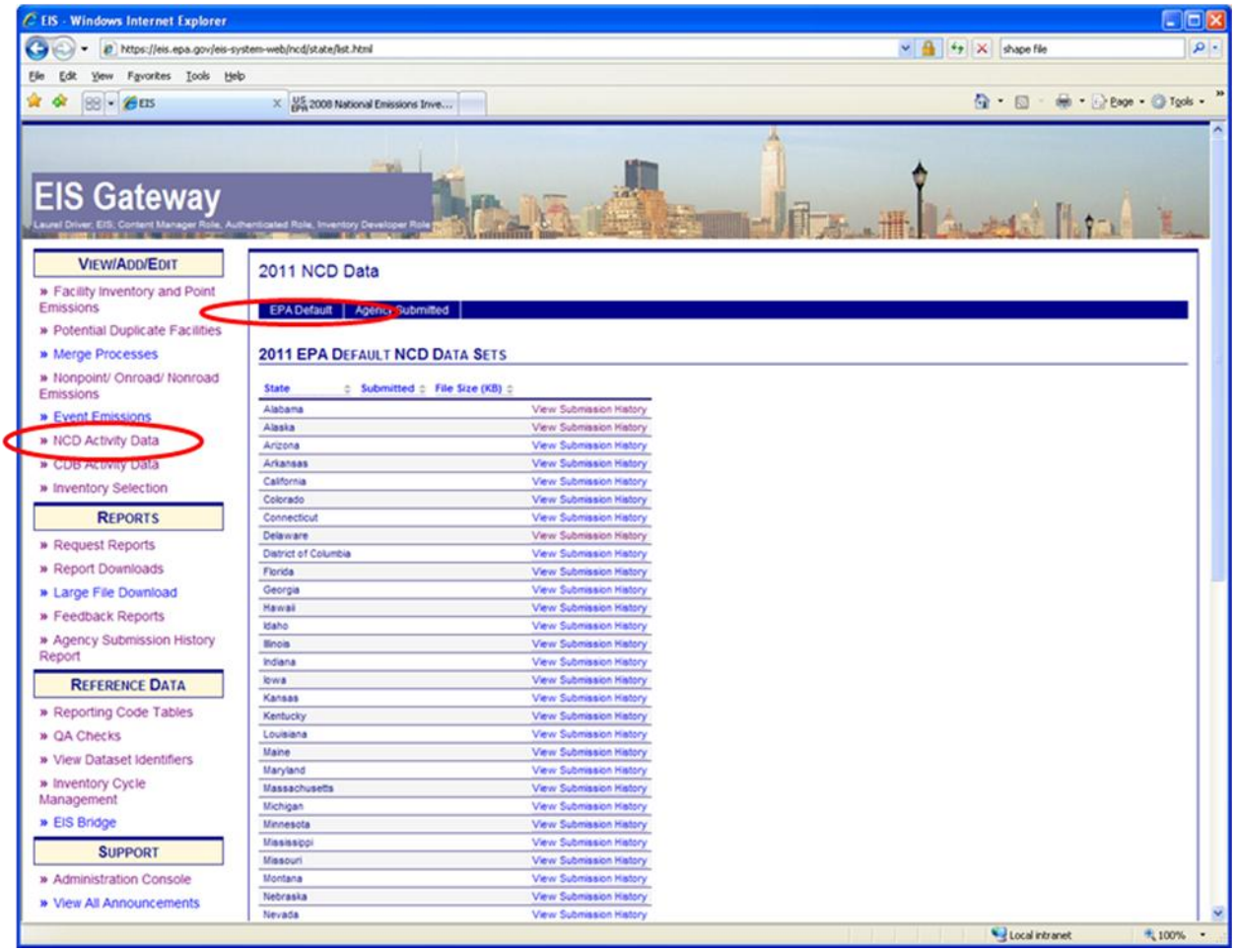
This table affects only the onroad emission calculations and will not be used in the 2011 NEI. Therefore, state and local agencies should not make any updates to this table for the 2011 NEI. However, this table must be present in the submissions to the EIS, so the default table provided by EPA should be included in the submission, with no changes from the state/local agency.

III. METHOD FOR PROVIDING UPDATES AND CHANGES TO THE NMIM COUNTY-LEVEL DATABASE

This section discusses how state and local agencies should access EPA's default NMIM county-level database and submit updates and changes.

Using the Emissions Inventory System (EIS) Gateway, select "NCD Activity Data," "EPADefault," and your state, as illustrated in Figure 1. EIS contains zipped files for all 50 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. Download the file that includes all the NCD data for your state. Each zip file contains the 2011 NMIM default county-level database tables in CSV format for that state along with the associated external data files. The tables included are those described in Section II above. It is important to note that S/L agencies are required to send the complete set of NCD tables back to EPA even if changes were not made to each table.

Figure 1. EIS Gateway—2011 EPA Default NCD Data Sets



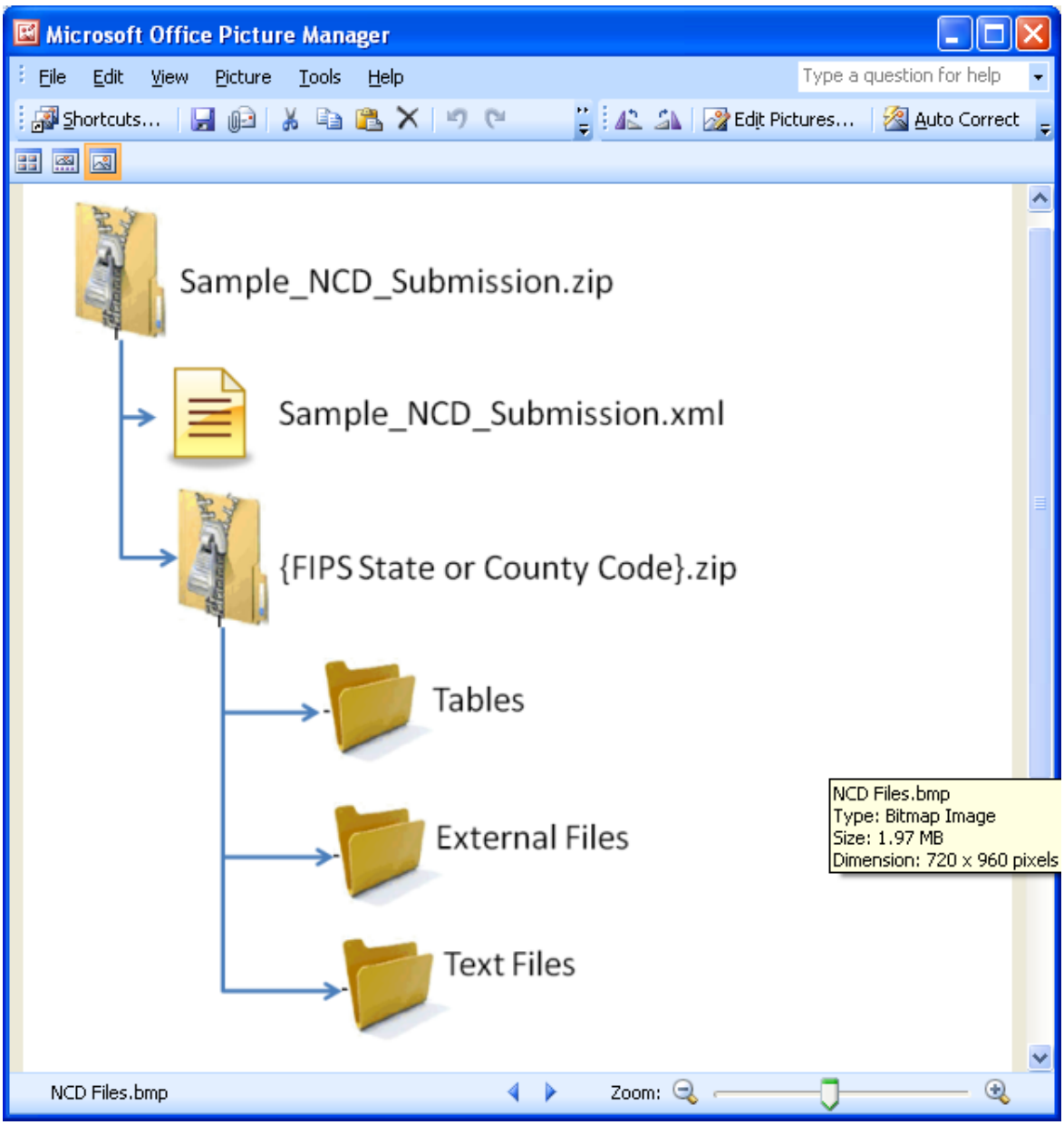
Once you make corrections to the EPA default NCD tables and external files, prepare a zipped named "SS000.zip" for a complete state submittal, or "SSCCC.zip" for a county submittal,, where SS=the 2 digit state code, and CCC= the 3 digit county code, that contains:

1. All eleven NCD tables in a folder named "Tables" for all the counties included (submittals must be for only one county, or for all counties in the state).
2. All external files in a folder named "External Files"
3. A .txt file named "Text File" that contains a description of revisions made to EPA default values and sources of the revised data.

Use the Bridge Tool or edit the "NCDSampleHeader.xml," available on the 2011 NEI webpage (http://www.epa.gov/ttn/chief/net/2011inventory.html, to "wrap" the zip file for submission. Be sure the xml references the zipped data file name (e.g., "SS000.zip"). Your submittal package must be organized as shown in Figure 2.

Zip the xml package and submit through the CDX Node.

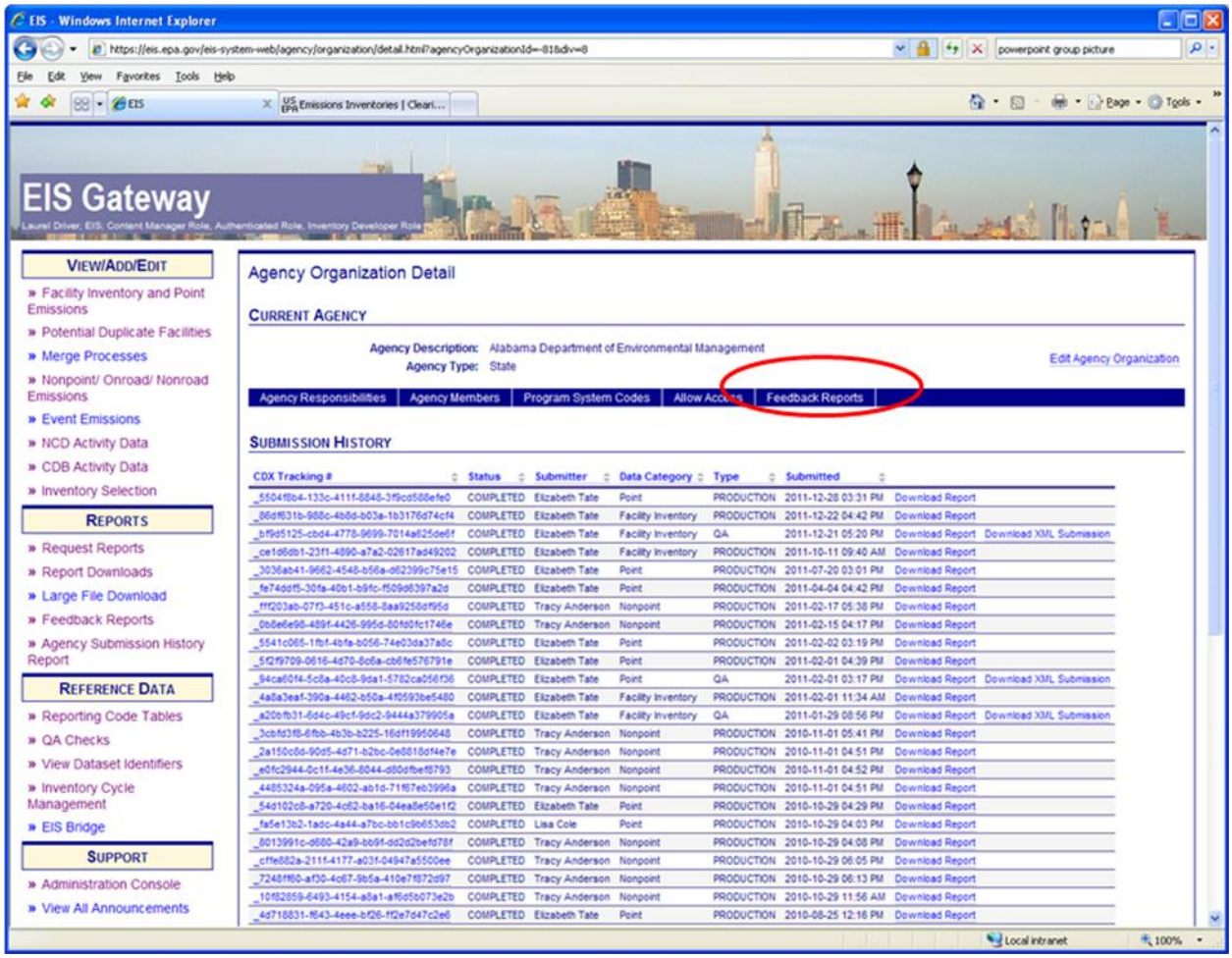
Figure 2. Required Directory Structure to be used for NCD Submittals



When submitting to EIS, be sure to submit to the Quality Assurance Environment first to insure your NCD files pass EIS QA before submitting to production.

You can check the feedback on your submittal in EIS by choosing your agency and the "Feedback Reports" tab as shown in Figure 3.

Figure 3. EIS Gateway—Agency Organization Detail



IV. FURTHER INFORMATION

For questions or comments regarding the NMIM data base structure, format, the mechanics of the NMIM framework or recommendations for improvements, contact EPA's OTAQ at *mobile@epa.gov*.

For questions or comments about the NEI or the December 31, 2012 submittal deadline, contact *Laurel Driver* in EPA's Emission Inventory and Analysis Group at *(919) 541-2859* or email to *driver.laurel@epa.gov*.

APPENDIX A. NMIM NAMING CONVENTIONS AND CODES

Table A-1. Definition of NMIM HourID Codes Used in the CountyYearMonthHour Table

HourID Code	Hour Description
1	Hour beginning at 12:00 midnight
2	Hour beginning at 1:00 AM
3	Hour beginning at 2:00 AM
4	Hour beginning at 3:00 AM
5	Hour beginning at 4:00 AM
6	Hour beginning at 5:00 AM
7	Hour beginning at 6:00 AM
8	Hour beginning at 7:00 AM
9	Hour beginning at 8:00 AM
10	Hour beginning at 9:00 AM
11	Hour beginning at 10:00 AM
12	Hour beginning at 11:00 AM
13	Hour beginning at 12:00 Noon
14	Hour beginning at 1:00 PM
15	Hour beginning at 2:00 PM
16	Hour beginning at 3:00 PM
17	Hour beginning at 4:00 PM
18	Hour beginning at 5:00 PM
19	Hour beginning at 6:00 PM
20	Hour beginning at 7:00 PM
21	Hour beginning at 8:00 PM
22	Hour beginning at 9:00 PM
23	Hour beginning at 10:00 PM
24	Hour beginning at 11:00 PM

Table A-2. Valid NMIM FileTypeID Codes Used in the CountyNRFile Table

FileTypeID Codes	File Type Description
sea	Seasonality
pop	Population files
grw	National defaults
sbr	Snowblowers res.
sbc	Snowblowers comm.
snm	Snowmobiles
frm	Harvested acres
con	Construction empl.
wob	Rec marine outbrd
wib	Rec marine inbrd
gc	Golf course estab.
air	Air Transportation
min	Coal mining empl.
com	Wholesale establis.
log	Logging empl.
lsc	Landscape empl.
mfg	Manufacturing empl.
oil	Oil & Gas empl.
rvp	RV Park establish.
cen	Census population
hou	Family housing
rr	Railway maintenance equipment

Table A-3. File Naming Conventions for External Data Files Named in the NMIM CountyNRFile Table

File Name	Description	Corresponding NONROAD Default File
*****.sea	Seasonal allocations.	season.dat
*****.pop	Source populations.	us.pop, xx.pop (where xx is state abbr.)
*****.grw	Growth rates.	nation.grw
*****sbr.alo	Residential snowblower allocations.	sbr.alo
*****sbc.alo	Commercial snowblower allocations.	sbc.alo
*****snm.alo	Snowmobile allocations.	snowm.alo
*****frm.alo	Farming equipment allocations.	farms.alo
*****con.alo	Construction equipment allocations.	const.alo
*****wob.alo	Outboard watercraft allocations.	wob.alo
*****wib.alo	Inboard watercraft allocations.	wib.alo
*****gc.alo	Golf equipment allocations.	golf.alo
*****air.alo	Airport equipment allocations.	airtr.alo
*****min.alo	Coal mining equipment allocations.	coal.alo
*****com.alo	Wholesale establishment allocations.	holsl.alo
*****log.alo	Logging equipment allocations.	loggn.alo
*****lsc.alo	Commercial landscaping equipment allocations.	lscap.alo
*****mfg.alo	Manufacturing equipment allocations.	mnfg.alo
*****oil.alo	Oil production equipment allocations.	oil.alo
*****rvp.alo	Recreational vehicle park allocations.	rvprk.alo
*****pop.alo	Human population allocations.	pop.alo
*****hou.alo	Household allocations.	house.alo
*****rr.alo	Railway maintenance equipment	rail.alo

NOTES: ***** Indicates the five digit FIPS code for the county. Use “000” for the county code portion of the FIPS for statewide submissions. All files are external data files in text format.

Table A-4. File Naming Conventions for NONROAD External Data Files Named in the NMIM CountyYear Table

File Name	Description
*****YY.act	Activity rates. (NONROAD)

NOTES: ***** indicates the five digit FIPS code for the county. YY indicates valid calendar year (1951 - 2050). Use “000” for the county code portion of the FIPS for statewide submissions. All files are external data files in text format.